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indicate significant differences at seat heights of 90, 100 and 110° elbow angle. Recent results of an absolute variation in the *for/aft position* in a group of 8 male spinal cord injured subjects revealed no significant effects upon total force, torque and fraction effective force FEF or the cardio-respiratory parameters under the submaximal conditions studied.

CONCLUSIONS

It may be concluded that combined biomechanical and physiological research of wheelchair racing and wheelchair propulsion is of utmost importance to develop a thorough theoretical framework of arm work. This can lead to the improvement of wheelchair sports performance and daily wheelchair ambulation as a consequence of a better understanding of the human engine and its interfacing with the wheelchair. Moreover, such a knowledge base will lead to a better understanding of the hand-arm-shoulder system in general, but also with respect to functional disabilities and in conjunction with overuse injuries to the musculo-skeletal system.

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